

## INTERNATIONAL SEARCH REPORT

PCT/GB 03/05308

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 B21J15/10 B21J15/14 B23Q39/02 B25J15/00			
According to International Patent Classification (IPC) or to both national classification and IPC			
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 B21J B23Q B25J			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ			
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>			
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
X	US 4 645 112 A (COOK DANIEL D ET AL) 24 February 1987 (1987-02-24) column 3, lines 29-46 column 7, line 57 - column 9, line 28 column 11, line 9 - column 12, line 25; figures 1,6-9	1-8	
X	US 6 108 896 A (GIGNAC JACQUES ET AL) 29 August 2000 (2000-08-29)	15-21, 23-29,	
A	column 3, lines 20-46; figures 4,6,8	34-40 1	
X	DE 100 27 985 A (EISENBACK B ROTOX GMBH) 3 January 2002 (2002-01-03) paragraphs '0035! - '0043!; figures 1-8	1	
		-/-	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		<input checked="" type="checkbox"/> Patent family members are listed in annex.	
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the International filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the International filing date but later than the priority date claimed			
Date of the actual completion of the international search  3 June 2004		Date of mailing of the international search report  22.06.2004	
Name and mailing address of the ISA European Patent Office, P.O. 5016 Paterlinen 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax. (+31-70) 340-3016		Authorized officer  Augé, M	

Form PCT/ISA/210 (second sheet) (January 2004)

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C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 557 035 A (HANINGER RUDOLF ET AL) 10 December 1985 (1985-12-10) column 1, lines 51-63 column 5, lines 36-55; figures 1,3	1
A	GB 2 192 357 A (AERPAT AG) 13 January 1988 (1988-01-13) page 2, lines 48-61; figures 1,2	1
A	DE 100 61 883 A (MUELLER THOMAS ;TDM ELEKTRONIK (DE)) 27 June 2002 (2002-06-27) paragraphs '0027! - '0031!; figure 1	1
A	CH 328 511 A (AUTELCA AG) 15 March 1958 (1958-03-15) page 1, line 61 - page 3, line 20; figure 1	1
A	US 4 821 584 A (LEMBKE JOHN R) 18 April 1989 (1989-04-18) column 2, line 53 - column 3, line 15 column 5, lines 25-35; figure 2	30-32
A	WO 99/61205 A (GEN ELECTRO MECH CORP) 2 December 1999 (1999-12-02) page 14, lines 28-31; figure 10	30

**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/GB 03/05308

**Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(e) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
  
  
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
  
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)**

This International Searching Authority found multiple inventions in this International application, as follows:

**see additional sheet**

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
  
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

International Application No. PCT/ GB 03 /05308

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-14

Tool support comprising at least two tool carrier arms, movable relative to a fixed datum.

2. claims: 15-33

End effector for an automated riveting machine comprising a drilling tool, a sealant dispensing tool and a riveting tool.

3. claims: 34-37, 38-40

Automated riveting machine and method wherein two end effectors are positioned on opposite sides of a workpiece and in-line.

## INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4645112	A	24-02-1987	US EP JP	4515302 A 0082680 A1 58110147 A	07-05-1985 29-06-1983 30-06-1983
US 6108896	A	29-08-2000	FR DE DE EP	2647696 A1 69001202 D1 69001202 T2 0402222 A1	07-12-1990 06-05-1993 08-07-1993 12-12-1990
DE 10027985	A	03-01-2002	DE	10027985 A1	03-01-2002
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CH 328511	A	15-03-1958	NONE		
US 4821584	A	18-04-1989	NONE		
WO 9961205	A	02-12-1999	AU WO US	4214899 A 9961205 A2 6295710 B1	13-12-1999 02-12-1999 02-10-2001